

## CLAIMS

1. A disk playback device capable of reproducing  
signals from a disk by irradiating the disk with a laser  
5 beam from an optical head, the disk playback device  
comprising a laser drive circuit capable of feeding a drive  
signal to the optical head and adjusting a power of the  
laser beam irradiated by the optical head and a control  
circuit for controlling operation of the laser drive  
10 circuit, wherein the control circuit comprises reproduction  
power optimizing means for repeatedly optimizing the power  
of the laser beam for signal reproduction, and the  
reproduction power optimizing means comprises:

evaluation data detecting means for detecting  
15 evaluation data representing quality of a signal  
reproduction state;

retrieving means for retrieving one boundary value of  
two boundary values of a reproduction power wherein the  
evaluation data is a prescribed value or in the vicinity of  
20 the prescribed value; and

optimum reproduction power calculating means for  
calculating an optimum reproduction power based on the one  
boundary value retrieved,  
wherein the retrieving means retrieves a new boundary value

based on a boundary value obtained by a previous optimizing processing.

2. A disk playback device according to claim 1,  
wherein the retrieving means retrieves a lower boundary  
5 value having a smaller value from the two boundary values,  
and the optimum reproduction power calculating means adds a  
predetermined value to the lower boundary value to thereby  
determine the optimum reproduction power.

3. A disk playback device according to claim 1 or 2,  
10 wherein the evaluation data is a frequency of occurrence of  
bit errors included in a reproduced signal.

4. A disk playback device according to any one of  
claims 1 to 3, wherein the disk playback device comprises  
temperature detecting means for detecting a temperature of  
15 the disk, and the reproduction power optimizing means  
optimizes the reproduction power whenever the temperature  
of the disk varies by a predetermined temperature.